

PRIMERA MESA REDONDA DE PALENQUE PART I.

*A Conference on the Art, Iconography,
and
Dynastic History of Palenque*

Palenque, Chiapas, Mexico. December 14-22, 1973

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PACAL

Probably the greatest ruler of Palenque. He ruled from 9.9.2.4.8 (A.D. 615) to 9.12.11.5.18 (A.D. 683). He ascended the throne at age 12 years 125 days, and died at age 80 years 158 days. He is entombed in the sarcophagus of the Temple of the Inscriptions.

Above is one of several forms of the glyphic expression of his name. It is from the west panel of the Temple of the Inscriptions, column A, row 3.

LEFT GLYPH. Superfix: *Mah K'ina*, a title of honor and respect for lineage heads and rulers. Main sign: An iconic sign for Shield, possibly read as *Pacal*, a Mayan word for shield, or as *Chimal*, another widely used word for shield, which was a borrowing from Nahuatl.

RIGHT GLYPH. Top: a phonetic sign for the syllable *pa*. Center: a phonetic sign for the syllable *ca*. Bottom: a phonetic sign for the syllable *la* or for a final *l* following *a*. The three together read *Pa-ca-l*, a spelling of the Maya word for shield.

His name was probably a double name, with a personal name 'Shield' (either *Pacal* or *Chimal*) and a lineage name 'Shield' (certainly pronounced *Pacal*). The name *Pacal* is well documented as a lineage name among the Quiché, still in use throughout the sixteenth century. It was probably known and so used among other Mayan peoples also.

The title *Mah K'ina* was also known in the highlands still in colonial times and is documented for that period. It too must have had wide currency. It is of two parts, which could be used separately or as a compound. The first part was current in colonial times as a Cakchiquel title for heads of lineages, and it is still in use today among the Chol for the chief mayordomos of their principal saints.

Floyd G. Lounsbury

Some Architectural Similarities between Dzibilchaltun and Palenque

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Dzibilchaltun, a large Maya site just north of Merida, Yucatan, lies only fifteen kilometers from the coast of the peninsula. Throughout much of its long history the site seems to have been at least partially dependent on the sea for food, raw materials, such as salt and shell, and many of its contacts with the rest of Mesoamerica.¹ This paper will describe several architectural similarities between Dzibilchaltun and the western Maya lowlands, notably Palenque, in the first half of the eighth century A.D. The relationships these imply appear to have resulted from a burgeoning of Maya civilization in the western lowlands, which in turn spread into northwestern Yucatan, probably by way of the Gulf Coast.

Small ruin groups are scattered almost continuously over more than 20 sq. km. of the Dzibilchaltun archaeological zone, but by far the heaviest concentration of structures lies within a 1-km. radius of Cenote Xlacah. Architectural remains extend through the more than 2000 years from the Middle Formative to the Decadent (Late Postclassic) Period, but approximately 85 per cent of the datable construction is concentrated in a 250 or 300 year span, encompassing late Early Period II and the Pure Florescent (equivalent to Tepeu 2 and the Terminal Classic in the southern lowlands, or ca. A.D. 650 or 700 to 950). Structural remnants of Early Period I (Early Classic) are almost non-existent, and no buildings were found that could be placed in the first part of Early Period II (equivalent to Tepeu 1), although remains of this time probably lie buried below later platforms.

About the middle of Early Period II, large architectural complexes sprang up over much of the site, centering around Cenote Xlacah (fig. 6). Sacbes 1 and 2, running east and west from the core of the site, form its central 2-km.-long axis, ending in broad rubble-filled terraces. Each of these huge terraces supported a roughly similar arrangement of platforms and vaulted rooms. That on the east consists of a large temple-pyramid (Strs. 1 and 1-sub) to the west of which is a line of six vaulted rooms in three back-to-back pairs (Strs. 4-9). A high masonry wall ran from the northern set of



Fig. 1 The Temple of the Seven Dolls (Str. 1-sub) at Dzibilchaltun. West facade.

¹The National Geographic Society-Tulane University program of research at Dzibilchaltun lasted from 1956 to 1965, directed by the late E. Wyllys Andrews IV of the Middle American Research Institute at Tulane. Several preliminary reports by Andrews IV (1959, 1960, 1961, 1962, 1965a, 1965b, 1968, 1973) describe the excavations and archaeological sequence at Dzibilchaltun. The final reports on architecture, settlement pattern survey, ceramics, artifacts and other aspects of the project are in preparation or in press at the Middle American Research Institute. All investigations have been under contract with the Instituto Nacional de Antropología e Historia of Mexico.

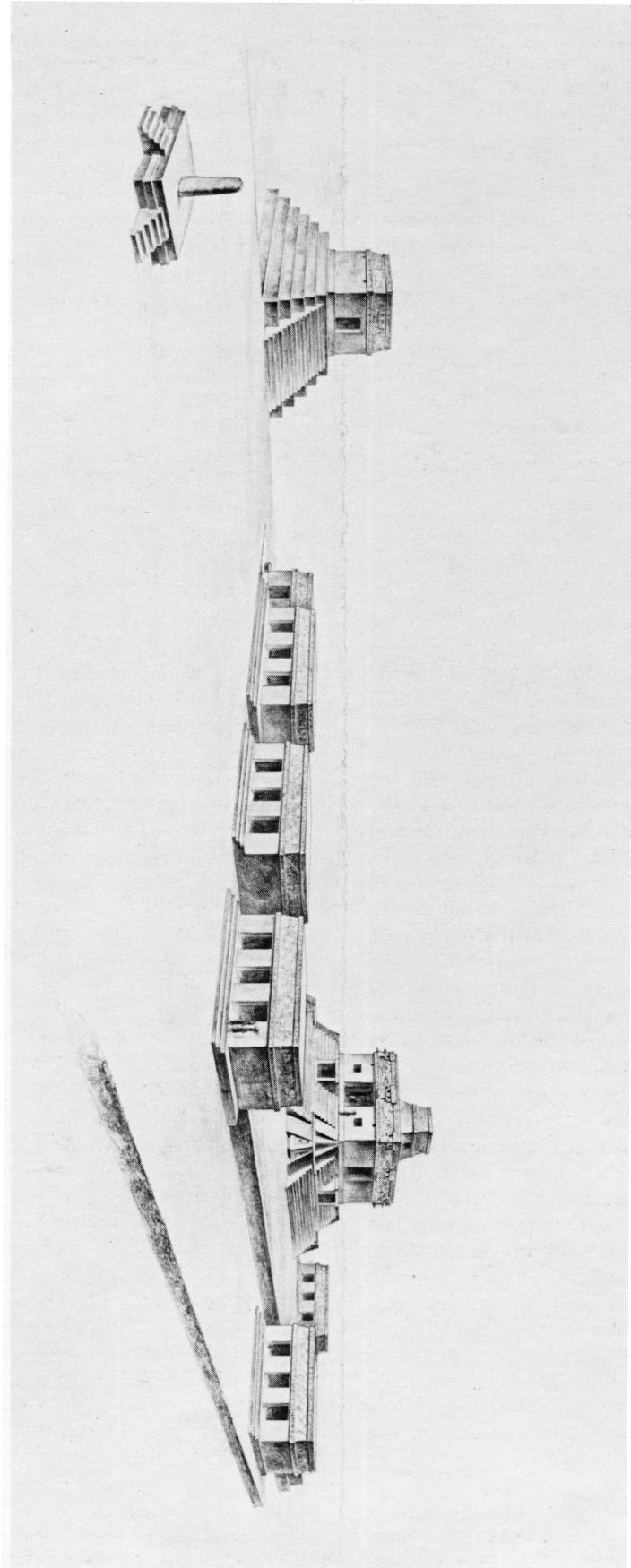


Fig. 2 The Seven Dolls Group. Perspective drawing by George E. Stuart and Lisa Biganzoli.

rooms around Str. 1 and back to the southern two rooms, so that access to the temple-pyramid was possible only by the passages flanking the central pair of rooms. Several vaulted structures surround this core group, including a small, badly ruined stepped platform with a single room atop to the north (Str. 11) and a stela platform (Str. 12) to the west (figs. 2 and 3).

It is this group of structures which bears architectural resemblances to Palenque. E. W. Andrews IV first noted some of these similarities in an unpublished paper written in 1958, saying, "One is equally impressed with the similarity of the Temple of the Seven Dolls [Str. 1-sub] and the buildings at Palenque, not far from the Usumacinta. The masonry techniques are at least roughly similar; the high development of stucco in architectural art, the parallel of windows (if the wall apertures at Palenque are to be thus interpreted), of vaulted multidirectional corridors, even of the central 'tower,' indeed of most of the anomalies mentioned, seem to find at least vague reflections at this distant site — much more apparent than any parallels available in the Peten sites directly to the south" (1959b, p. 57). Andrews IV never again mentioned his early idea, probably in part because the ceramic and architectural chronologies at both sites remained somewhat in flux until after his death in 1971. Today, in 1974, the periods of vast architectural growth at Dzibilchaltun and Palenque have been defined to within a few katuns, and a preliminary discussion of shared features seems appropriate.²

St. 1-sub (the Temple of the Seven Dolls, so named for a cache of seven crude clay figurines placed under its highest floor during the Decadent Period), is a large, almost square temple with a continuous vaulted corridor surrounding a small central chamber, the high roof of which forms a tower projecting above the main temple roof (fig. 4a). Doorways are centered on each side, leading to four wide inset stairways, and large rectangular windows flank the east and west entrances. The platform supporting the temple includes two sloping terraces with rounded and rectangular inset corners.

The groundplan of the Palace tower at Palenque is similar to that of the Temple of the Seven Dolls (fig. 4b). The continuous corridor at Dzibilchaltun is far wider than that at Palenque, and Str. 1-sub lacks the three stories of its relative, but conceptually the two are much alike. The low tower atop Str. 1-sub has a doorway on its south side with its base at the level of the main roof (fig. 5). The purpose of this opening must have been to allow exit to the roof, and for this a perishable ladder or scaffolding would have stood inside the central chamber.

The upper façades of the Temple of the Seven Dolls, set between single-member rectangular moldings, have a positive batter, although not as marked as those of Palenque and contemporary Usumacinta sites.

Upper zones were covered by elaborate carved stucco motifs, including large masks above the doorways and at corners. The corner masks on Str. 1-sub take the place of the typical Palenque raised corner moldings.

Unlike Str. 1-sub, preserved essentially intact under the rubble fill of a larger platform, the smaller range structures around it had completely collapsed. No wall stood higher than the medial molding, and the angle of their upper façades is unknown. The reconstruction drawing of the Seven Dolls Group shows them with battered upper zones, like Str. 1-sub. All may have borne masks, but evidence for this was lacking.

Inset corners are rare at Palenque, and Ruz has shown at least some of them to be the result of successive construction stages; i.e., resurfacings or enlargements of terraces intentionally did not cover the old corner, leaving an inset (e.g., Ruz 1958, fig. 5, pls. 15, 16). Despite their scarcity and the way in which they were formed, some Palenque inset corners resemble the corners of the lower terrace of Str. 1-sub. At neither site does this feature seem particularly similar to insets in the Peten, their probable area of origin.

Large windows are unusual in Maya buildings. The tau-shaped wall apertures at Palenque and Usumacinta sites are quite different from those at Str. 1-sub. The big, rectangular openings at Comalcalco provide perhaps the closest parallel to those at Dzibilchaltun, and the far western location of this site, near the Gulf Coast, is significant in the present context.

Masonry at Palenque is quite similar to that in the Seven Dolls Group. Walls at both sites are of crude, practically unshaped blocks, and cantilevered vault slabs are long and unfaced. The most obvious difference is that at Dzibilchaltun jamb stones and corner stones are roughly cut and pecked on one or more sides, whereas at Palenque they almost never are. Walls at both sites bore heavy coats of lime plaster. Exceedingly thick walls in the Seven Dolls Group, reaching 110 cm. in Str. 1-sub and 90-95 cm. in the surrounding ranges, closely approximate the standard 90 cm. wall thickness at Palenque during the Otolum phase (9.10.0.0-9.13.0.0.0).

Clearly one reason Str. 1-sub soon proved structurally inadequate and had to be filled and covered was that its builders used mud instead of lime mortar in walls and vaults. As a bonding agent, mud, even if mixed with small amounts of crushed lime, is a poor substitute, yet at Dzibilchaltun mud was the predominant mortar throughout much of the second half of Early Period II. Most buildings at Palenque utilized lime mortar, but in some early rooms, notably the "subterranean" rooms under the Palace, mud mixed with yellow-white crushed lime seems to have been used. This primitive technique is rare enough during the Classic Period that its presence at Dzibilchaltun and Palenque is probably significant.

²Detailed descriptions of the Seven Dolls Group will appear in the final report on the excavations and architecture (Andrews IV and Andrews V, in preparation). The present discussion does not pretend to be a comprehensive study of the architecture.

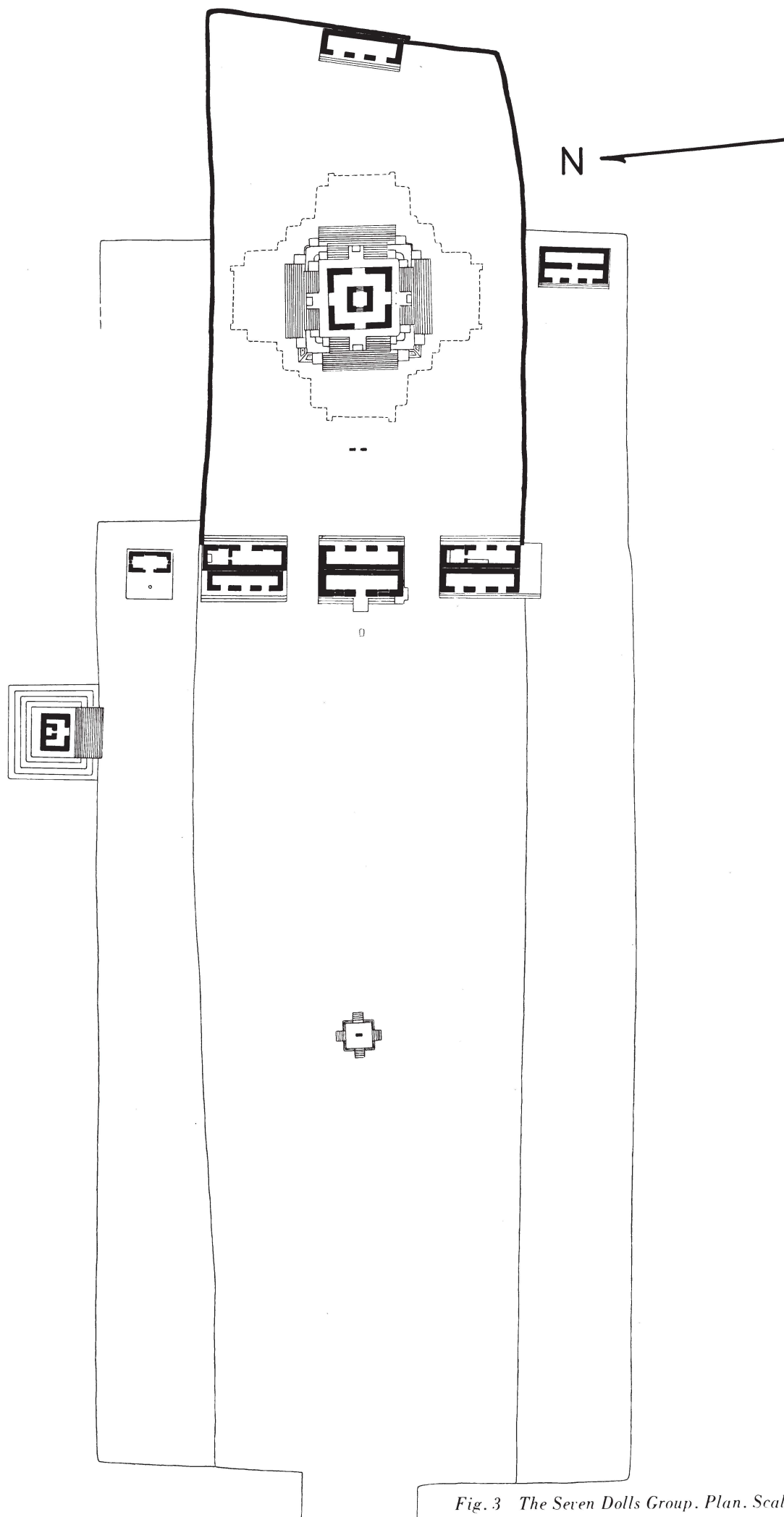


Fig. 3 The Seven Dolls Group. Plan. Scale 1:1000.

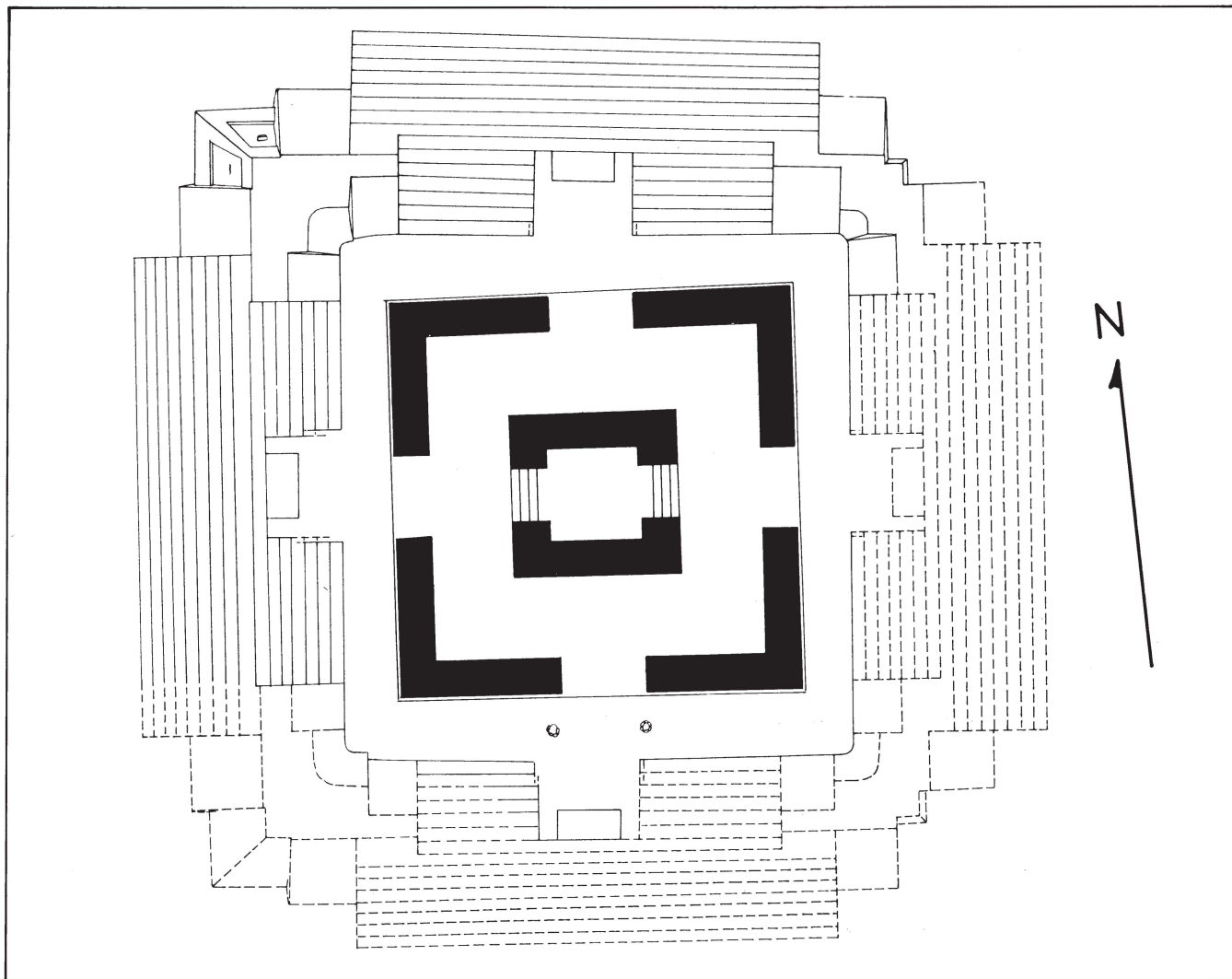


Fig. 4a Structure 1-sub. Seven Dolls Plan. Scale 1:200.

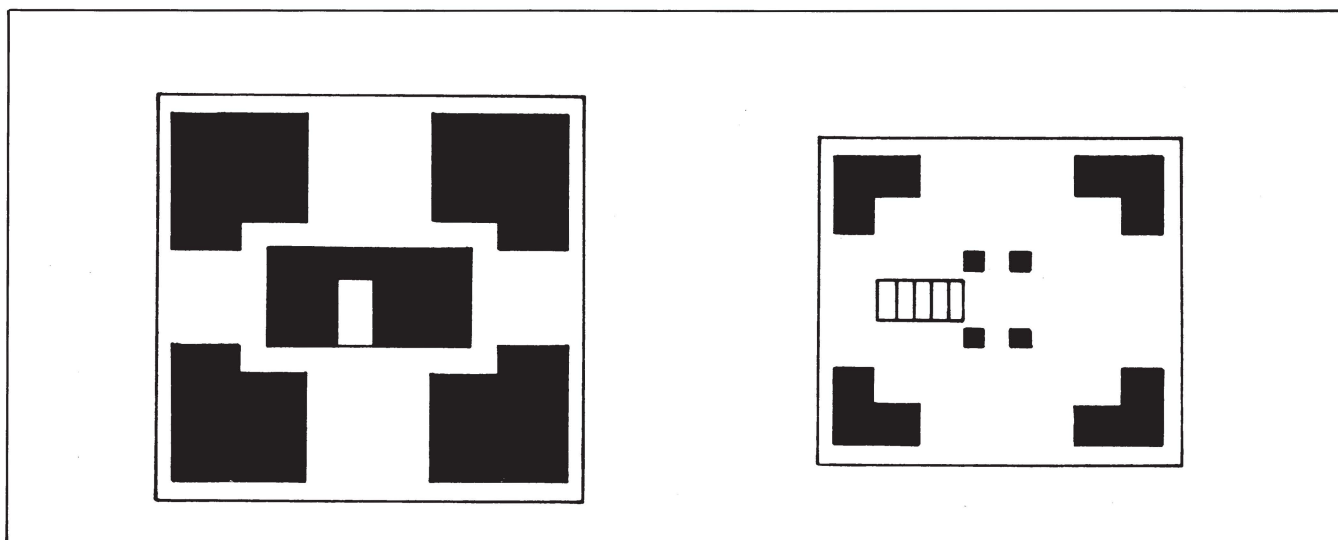


Fig. 4b The Tower at Palenque. Ground plans. Left: bottom story; right: top story. Scale 1:120. After Maudslay, 1889-1902, vol. IV, pl. 39.

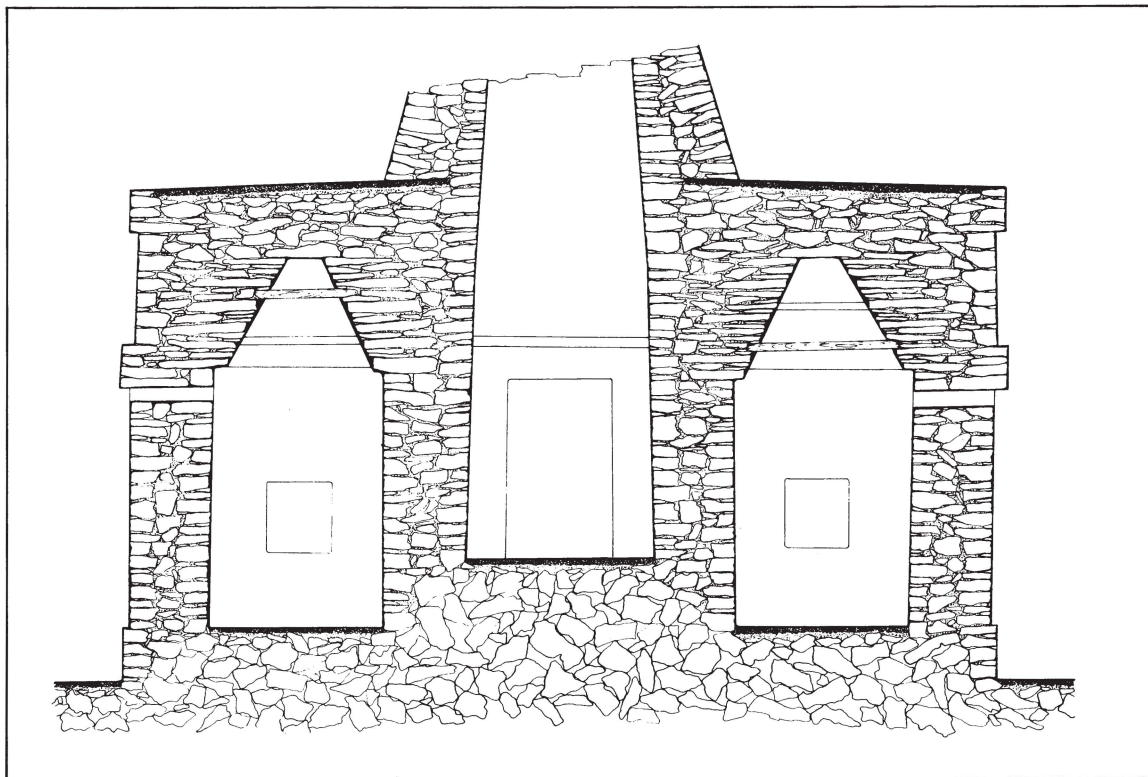


Fig. 5 Structure 1-sub. North-south section. Scale 1:100.

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The handling of interior space at Palenque distinguishes that site from its contemporaries in the Peten and in most other parts of the Maya lowlands. Exteriors of buildings are richly decorated with modeled stucco, and, as in other areas, roofcombs resting on the central building mass add to the visual impact of exterior surfaces. Yet at Palenque interior space is never sacrificed for external effect — all its large edifices have an interior spaciousness rarely found in southern lowland structures. This quality of openness is best developed in the Palace complex.

The Temple of the Seven Dolls, open on four sides and pierced by four large windows, is also an unusually open and airy building, quite cool and pleasant, much in contrast to most Maya rooms, which tend to be dark and dank. The ranges surrounding Str. 1-sub have three doorways each, so that their lower façades were almost half open. Str. 10, the small, one-room vaulted building at the north end of the line of rooms west of Str. 1-sub, carries this tendency almost to an extreme. All four short sides are pierced by doorways, and remaining walls are reduced to little more than large, L-shaped masonry piers. The groundplan of this little building is not very different from that of the upper story of the tower at Palenque, although the roof of the latter was supported by cross-vaulting, a technique apparently unknown at Dzibilchaltun.

Str. 11, the small building atop a steep five-stage platform northwest of Str. 1-sub, is now little more than

a large pile of rubble. It was mapped in 1958, however, as a single-room superstructure with a small interior shrine attached to the rear wall. Today this arrangement is not visible, but if the suggestion is correct, the parallel with the much larger Palenque temple shrines is obvious.

Although details of the similarities outlined here may be subject to modification and elaboration, the proposition that a strong relationship existed appears unquestionable. Clemency Coggins, who is preparing the final reports on the Dzibilchaltun carved stucco and stone sculpture, believes that the Str. 1-sub stucco façade shows similarities to stucco work at Palenque. She also notes close connections in mid-ninth cycle stone sculpture at the two sites (personal communication, 1973). Linda Schele, drawing on her present study of Palenque iconography and architecture, agrees with these preliminary conclusions (personal communication, 1974).

The stucco façade of Str. 1-sub, a restoration drawing of which appears in Andrews IV, 1959, pp. 102-03, is different in detail from any reliefs known at Palenque. In concept, however, it resembles the stucco panel over the north door of House E in the Palace (Maudslay 1889-1902, vol. 4, pl. 43). Both have corner masks, a central mask over the entry, and stylized serpent bodies connecting them.

Even if Palenque and Dzibilchaltun are shown to share stylistic traits, it is necessary to demonstrate that

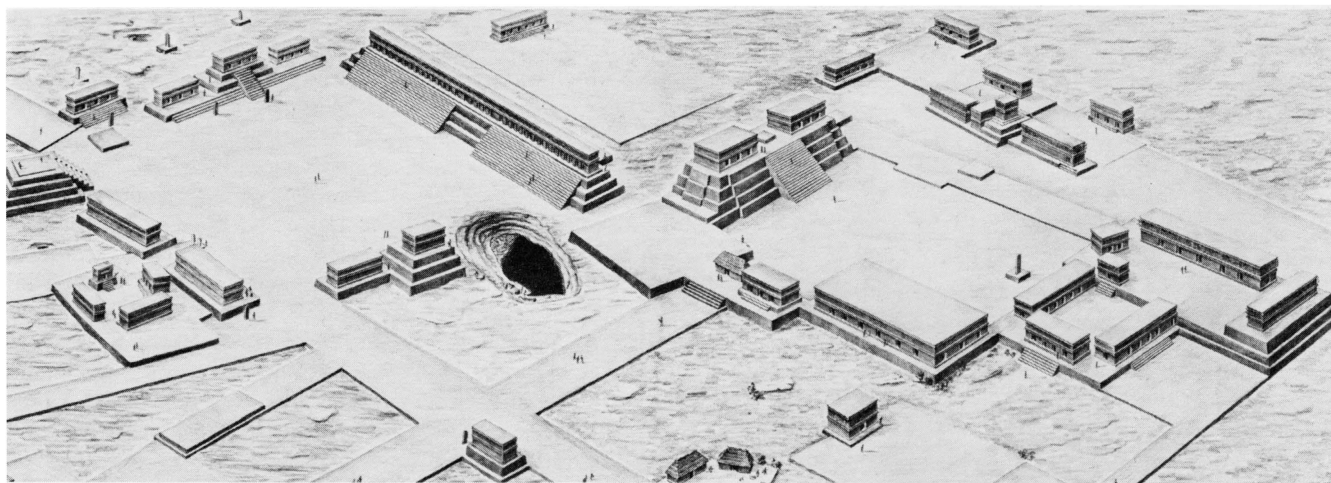


Fig. 6 The Palace Group at Dzibilchaltun. Perspective drawing by George E. Stuart.

the shared features appear at approximately the same time in both areas. Recent refinements of the chronology of the two sites permit this correlation. Robert L. Rands suggests that on the basis of epigraphic and ceramic evidence much of the standing architecture at Palenque (for example, the Temples of the Inscriptions, Cross, Foliated Cross, and Sun and Houses A, A-D, D and C of the Palace) may be dated between 9.11.0.0.0 and 9.14.0.0.0, during the Otolum and Murcielagos phases (1973, pp. 184-85, and Schele, personal communication, 1974). Study of the Palenque inscriptions has established a tentative list of rulers, with their birth, accession and death dates (Schele and Mathews 1973), and this research prompts Schele to place the architectural and sculptural florescence of this site between 9.9.0.0.0 and 9.14.0.0.0. The Palace tower, suggested here to be a model for the Temple of the Seven Dolls, she believes was constructed somewhere between 9.12.15.0.0 and 9.14.10.0.0, during the reign of the Palenqueño ruler *Chan-Bahlum* or *Hok* (personal communication, 1974).

Chronological placement of the Seven Dolls Group at Dzibilchaltun is almost as precise as that of the major architectural groups at Palenque. Separate analyses of different aspects of the Dzibilchaltun archaeological sequence place this early complex near the beginning of the eighth century A.D. Michael P. Simmons, now finishing the final report on the post-Formative pottery, believes the sealed samples from Str. 1-sub should be aligned with the early Tepeu 2 horizon. Preliminary analysis of the carved stucco façades and the stone sculpture suggests to Clemency Coggins that strong influences from the western Maya lowlands reached Dzibilchaltun between 9.12.0.0.0 and 9.14.0.0.0. The only stone monument at the site with a decipherable date (Stela 9) reads 9.14.10.0.0 5 Ahau 3 Mac, and stylistic considerations led Andrews IV to place several other broken monuments without interpretable calendric inscriptions a few decades earlier.

The most direct link at Dzibilchaltun to the southern lowland chronology, and thereby to the Long Count, is provided by trade polychromes found in sealed contexts. Ceramic refuse was unusually scarce in the Seven Dolls Group, and polychrome sherds were rare. Three sealed sherds of Hool Orange Polychrome, a Chenes type dated by stylistic attributes between 9.9.0.0.0 and 9.17.0.0.0, were found in fill of three range structures surrounding Str. 1-sub. One of these was sealed in fill of the terrace on which the entire group was built. Joseph W. Ball believes almost all Hool Orange Polychrome sherds at Dzibilchaltun, including these three, postdate 9.13.0.0.0, the beginning of Tepeu 2 (Ball and Andrews V, n.d.).

The combined weight of these distinct lines of evidence indicates a date for the Seven Dolls Group in the first decades of the eighth century A.D., or between 9.13.0.0.0 and 9.15.0.0.0, equivalent to the first two katuns of Tepeu 2. The similarities to dated Palenque architecture independently support this conclusion, but the likelihood of these, of course, is the issue at hand. Following construction of the Seven Dolls Group, but before the beginning of the Pure Florescent (Puuc) style at about 10.0.0.0.0 to 10.2.0.0.0, architecture at Dzibilchaltun underwent considerable change. This late Early Period II development must be allowed the better part of a century, and for this reason I hesitate to push the Seven Dolls Group later than about 9.15.0.0.0, as it is clearly the earliest group of Early Period II structures yet investigated.

If Dzibilchaltun at the beginning of Tepeu 2 shares architectural features with Palenque and the western Maya lowlands in general, connections might also be expected in ceramics. Fine Orange Ware, probably manufactured at sites near the Gulf Coast in Tabasco and brought by coastal trade to northwestern Yucatan, appears early at Dzibilchaltun. A few Balancan Orange sherds were found in the Seven Dolls Group, deriving from sealed contexts; by the end of Early Period II this

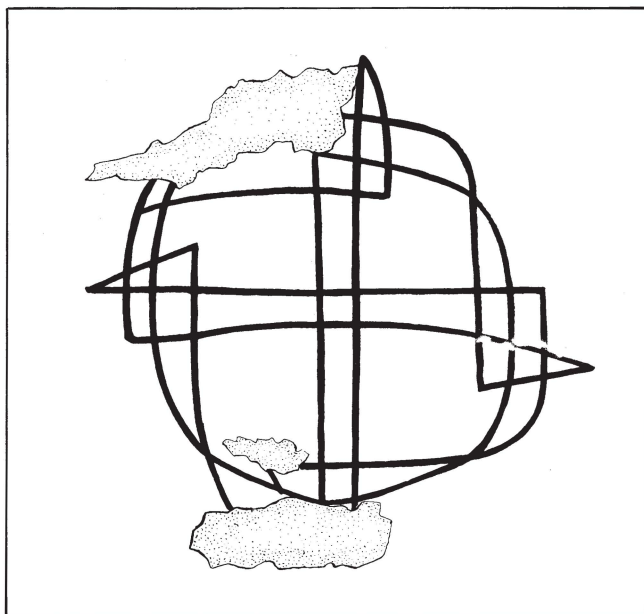


Fig. 7 Structure 1-sub. Graffito drawn in black pigment on an interior wall. The drawing is known to date to late Early Period II. Maximum diameter is 26 cm.

ceramic group is an important component of all large excavated lots, as is Fine Gray Ware. Balancan and Altar Orange were imported to southern lowland sites only about the end of Tepeu 2, although fine paste wares appear earlier along the middle Usumacinta and at sites in the Palenque area.³ The western lowlands were clearly exporting pottery to northern Yucatan long before they were to the Peten.

Influences from the central Usumacinta Valley, as well as from Palenque, seem to have reached Dzibilchaltun during late Early Period II. Str. 46, just south of Cenote Xlakah in the Palace Group (fig. 6), is a long, high platform which supports twin temples. Maler illustrated a similar structure with three terraces at El Chile, on the central Usumacinta (1901, fig. 35), and at El Cayo he reported a two-story structure with five separate one-room vaulted buildings on top (ibid., fig. 28). Str. 46 is one of the very few stepped platforms at Dzibilchaltun with inset corners, which are common on the Usumacinta.

A graffito painted in black pigment on an interior wall of Str. 1-sub may provide additional evidence of contact between the Usumacinta and northern Yucatan. It consists of two concentric circles encompassing a cross of two sets of two parallel lines each (fig. 7). Maler reported four very similar designs carved in stone or wood at Piedras Negras, El Cayo, La Mar, and San Lorenzo, all on the central Usumacinta (ibid., pp. 75; 85;

94; figs. 27; 34a, b; 67). Although this graffito appears at other sites, usually in later contexts, it is perhaps noteworthy that one was painted on the floor of Patio A at Zacuala, Teotihuacan (Sejourné 1959, p. 54; fig. 37).

Dzibilchaltun is not the only site in northern Yucatan to show strong relationships with the west in Early Period II. The Stucco Temple at Acanceh, about thirty kilometers southeast of Dzibilchaltun, has a sloping upper façade (Andrews IV 1965a, fig. 4). Elaborate carved stucco figures and designs cover the trapezoidal panel and medial and superior moldings. The "Mexican" nature of the façade figures was noted by Eduard Seler as long ago as 1915. Both in architecture and stucco, then, Str. 1 at Acanceh appears to show western influences. The ceramic content of this structure is not clear, but its masonry is very similar to that of the Seven Dolls Group, and a date near the beginning of Tepeu 2 is likely (cf. Andrews IV 1965 a, p. 299).

A unitary origin for the early Tepeu 2 architectural stimuli at Dzibilchaltun is unlikely. Whereas the building style itself derives from the southwest, the arrangement of the group resembles nothing so much as an early stage in the development of Str. A-V at Uaxactun. Specifically, the late Tzakol platform of Str. A-V supported one large and two smaller temple-pyramids, access to which was controlled by a line of three two-room vaulted buildings similar to those west of Str. 1-sub (A.L. Smith 1950, figs. 3a, 4). Although this Uaxactun complex was completed by the end of the Early Classic, it remained visible until the end of Tepeu 1 and could therefore have served Dzibilchaltun as a rough model. Whether it did is questionable, but the plan of the group was certainly derived from the Peten rather than from the western lowlands. The arrangement may be a survival from a slightly earlier period of influence at Dzibilchaltun.

Distant influences at Dzibilchaltun do not die out after the initial stimulus from the southwest; in fact, their strength appears undiminished or increased. During the last few katuns of Early Period II and the early Pure Florescent, central Mexican architectural influences are strong. The late Early Period II construction stage of Str. 612 has a Teotihuacan-style *talud-tablero* (Andrews IV 1965b, fig. 5); Str. 38-sub at about the same time bears a *tablero* on its upper façade; and Str. 38, built during the Pure Florescent, probably had a *talud-tablero* roughly similar to, but stylistically later than, that of Str. 612. Fine Orange Ware (Balancan Orange) is one of the best-represented ceramic groups throughout this span, indicating continued trade with the southern Gulf Coast.

The significance of the relationships between the western Maya lowlands and northern Yucatan is not yet

³Dzibilchaltun Orange, first described by George Brainerd, was surprisingly rare in subsequent excavations at Dzibilchaltun, and its chronological placement at this site is still unclear. At Becan, Campeche, the ware is abundant, and it is limited to the Bejuco phase (equivalent to Tepeu 1 and the first half of Tepeu 2) (Ball 1973, pp. 88-89). Surface color of Dzibilchaltun Orange tends to be lighter than that of Balancan Orange, and it may be more closely related to Fine Brown Ware or Fine Cream Ware from the western lowlands, described in Rands (1973, pp. 187-94). If this is so, the ware is unlikely to have been traded to Becan and Dzibilchaltun before early Tepeu 2.

clear. Future excavations in both areas will surely bring to light relevant data. Linda Schele has suggested that the burst of activity at Palenque after the middle of the ninth cycle was felt as far west as Comalcalco and as far east as Chinkultic (personal communication, 1974). It now seems sure that this expansion strongly affected the northwestern corner of the Yucatan Peninsula as well as the Tabasco Plain. During Early Period I and the first part of Early Period II Dzibilchaltun was a very minor site — only after stimulus from the southwest did its great period of expansion begin, to last 250 or 300 years. The Seven Dolls Group is, nevertheless, only a crude attempt by inferior craftsmen to copy much finer examples. The masonry techniques they used were certainly not the equal of those employed at Palenque, and the structures consequently suffered, but the architects had

at least seen, if not entirely understood, the western prototypes. The origins of the stimulus should probably be ascribed, then, to the western lowlands and southern Gulf Coast as a whole, rather than to events at any specific site.

Still lacking in this exposition is a reason for the *Drang nach Osten*. Probably we shall never know the historical events that led to the great period of growth at Dzibilchaltun. One clue is perhaps offered by a few other sites of comparable size, including Tzeme and Chunchucmil, which are located at similar distances from the northwest coast, evenly spaced, as if they had among themselves allocated defined areas of coastal resources and trade. The prime resource, as Andrews IV suggested in 1968, may have been salt.

TABLE 1. Chronological Chart of Culture Periods in the Northern Maya Area and Ceramic Complexes at Dzibilchaltun *

MAYA LONG COUNT	NORTHERN MAYA AREA CULTURE PERIODS	DZIBILCHALTUN CERAMIC COMPLEXES	GREGORIAN CALENDAR
12.0.0.0.0	COLONIAL		1600
11.15.0.0.0	DECADENT	CHECHEM	1500
11.10.0.0.0			1400
11.5.0.0.0			1300
11.0.0.0.0			1200
10.15.0.0.0	MODIFIED FLORESCENT	ZIPCHE	1100
10.10.0.0.0	PURE FLORESCENT	COPO 2	1000
10.5.0.0.0			900
10.0.0.0.0	Puuc Hills Dzibilchaltun (Tepeu 2)	COPO 1	800
9.15.0.0.0	EARLY II (Tepeu 1)		700
9.10.0.0.0	EARLY I (Tzakol)	PIIM	600
9.5.0.0.0			500
9.0.0.0.0			400
8.15.0.0.0			300
8.10.0.0.0	LATE FORMATIVE	XCULUL 2	200
8.5.0.0.0		XCULUL 1	100 A. D.
8.0.0.0.0			0
7.15.0.0.0		KOMCHEN	100 B. C.
7.10.0.0.0			200
7.5.0.0.0	MIDDLE FORMATIVE	NABANCHE	300
7.0.0.0.0			400
6.15.0.0.0			500
6.10.0.0.0			600

*This chart presents a correlation of Maya and Christian calendars at approximately 11.16.0.0.0. For a correlation at approximately 12.9.0.0.0, see Andrews IV, 1965a, p. 289.

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